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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,644	02/27/2002	Yuuji Enomoto	381NT/50972	1814

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EXAMINER

NGUYEN, HANH N

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 10/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,644

Applicant(s)

ENOMOTO ET AL.

Examiner

Nguyen N Hanh

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: "10having" in lines 21, Page 27 should be --10 having--, reference signs (41) in Page 28-31 should be (40).

Appropriate correction is required.

2. Claims 2 and 9 are objected to because of the following informalities: "a laminated steel plate" should be --laminated steal plates-- in line 12, claim 2. "and" in line 3 of claim 9 should be omitted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4-6,9,10 are rejected under 35 U.S.C. 112, second paragraph, as failing to particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention

Claim 4 recites the limitation "the magnetic pole tooth section" in line 12 and "said magnetic pole tooth section" in line 22. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the magnetic pole tooth section" in line 12 and "said magnetic pole tooth section" in line 19. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 9, there is insufficient antecedent basis for "said plastic deformation"

Claim 10 is dependent claim of claim 4.

Regarding claim 6, the phrase "or the like" renders the claim indefinite because the claim includes elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 1,7,8 are rejected under 35 U.S.C. 102(e) as being anticipated by Schustek et al.

Regarding claim 1, Schustek et al. disclose an electric motor comprising; a stator core formed by an integrated set of a plurality of split core blocks (12 In Fig. 4); a core section having a metallic connection housing (10 in Fig. 4) that connects the individual split core blocks in dovetailed form to create one connected core section; and wherein the dovetailed connections at said connection housing are plastically deformed to remove the connection gap existing at each of the dovetailed connections (claim 2).

Regarding claim 7, Schustek et al. also disclose an electric motor wherein the connection gap is of a level at which the volume of the metallic material extruded by said plastic deformation is permissible (inherent because there is still air gap as described in Col. 1, lines 59, and the stator pole 12 is not deformed).

Regarding claim 8, Schustek et al. also disclose an electric motor wherein said connection housing to which the dieing tool to be used for forming by means of said plastic deformation (20a in Fig. 4), such as a punch, is provided with preholing, prepunching (recess in housing 10), or other preliminary machining,

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schustek et al. in view of Kazama et al. and further in view of Pierson.

Regarding claim 2, Schustek et al. show all limitations of the claimed invention except showing the split core blocks are each formed of laminated steel plates and said connection housing is formed of a material softer than said laminated steel plates.

However, Kazama et al. disclose an electric machine wherein split core blocks are each formed of laminated steel plates for the purpose of reducing cost.

Moreover, Pierson discloses an electric machine wherein the connection housing is formed of a material (brass or aluminum as described in Col. 2, lines 35-40)

softer than said laminated steel stator teeth for the purpose of accommodating the stator teeth.

Since Schustek et al., Kazama et al. and Pierson are in the same field of endeavor, the purpose disclosed by Kazama et al. and Pierson would have been recognized in the pertinent art of Schustek et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Schustek et al. by using core blocks are each formed of laminated steel plates and said connection housing is formed of a material softer than said laminated steel plates as taught by Kazama et al. and Pierson for the purpose of for the purpose of reducing cost and accommodating the stator teeth.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schustek et al. in view of Pierson.

Regarding claim 3, Schustek et al. show all limitations of the claimed invention except showing said connection housing is formed of a material softer than said laminated steel plates.

However, Pierson discloses an electric machine wherein the connection housing is formed of a material (brass or aluminum as described in Col. 2, lines 35-40) softer than said laminated steel stator teeth for the purpose of accommodating the stator teeth.

Since Schustek et al., and Pierson are in the same field of endeavor, the purpose disclosed by Pierson would have been recognized in the pertinent art of Schustek et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Schustek et al. by using the connection housing is formed of a material softer than said laminated steel plates as taught by Pierson for the purpose of for the purpose of accommodating the stator teeth.

9. Claim 4, 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierson in view of Schustek et al.

Regarding claim 4, Pierson discloses an motor comprising comprising: a stator; a rotor so positioned as to be freely rotatable around said stator; stator core that constituting said stator; core section constituting said stator core; a plurality of split core blocks constituting said core section; and metallic connection housing (10) connecting said split core blocks so as to form one integrated core section, wherein the magnetic pole tooth section formed by each of said split core blocks comprises a coil winding drum portion (Fig. 1 and)2, an outer-surface magnetic pole portion provided at the outer-surface front end of said coil winding drum and spread in a circumferential direction, and a support portion provided at the inner-surface front end of the coil winding drum; wherein said magnetic pole tooth section whose outer-surface magnetic pole portion is positioned at the outer-surface side and whose coil winding drum is radially positioned is connected in dovetailed form to said connection housing positioned at the inner surface side of said support portion.

The structure disclosed by Pierson fails to show an engagement protrusion or engagement recess for dovetailed connection is provided on the inner surface of the support portion and an engagement protrusion or engagement recess for dovetailed

connection is provided on the outer surface of the connection housing so as to fit into the engagement protrusion or engagement recess on the inner surface of the support portion; and wherein the engagement protrusion or engagement recess for dovetailed connection, provided in the connection housing, is plastically deformed to remove the connection gap existing between the engagement protrusion and engagement recess that fit one another.

However, Schustek et al. disclose an electric machine wherein an engagement protrusion or engagement recess for dovetailed connection is provided on the outer surface of the support portion and an engagement protrusion or engagement recess for dovetailed connection is provided on the inner surface of the connection housing so as to fit into the engagement protrusion or engagement recess on the inner surface of the support portion; and wherein the engagement protrusion or engagement recess for dovetailed connection, provided in the connection housing, is plastically deformed to remove the connection gap existing between the engagement protrusion and engagement recess that fit one another (Fig. 4) for the purpose of fixing the stator teeth.

Since Pierson and Schustek et al. are in the same field of endeavor, the purpose disclosed by Schustek et al. would have been recognized in the pertinent art of Pierson.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Pierson by using an engagement protrusion or engagement recess for dovetailed connection is provided on the outer surface of the support portion and an engagement protrusion or engagement recess for dovetailed

connection is provided on the inner surface of the connection housing so as to fit into the engagement protrusion or engagement recess on the inner surface of the support portion; and wherein the engagement protrusion or engagement recess for dovetailed connection, provided in the connection housing, is plastically deformed to remove the connection gap existing between the engagement protrusion and engagement recess that fit one another as taught by Pierson for the purpose of for the purpose of fixing the stator teeth.

Regarding claim 5, it is noted that Pierson and Schustek et al. have fulfilled all of the limitations of the claimed invention (refer to claim 4).

Regarding claim 10, Schustek et al. also disclose an electric motor wherein said plastic deformation flares said support portion in its circumferential direction to remove the adjacent gaps between the supports of said adjacent magnetic pole teeth.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schustek et al.

Regarding claim 6, Schustek et al. disclose the claimed invention except for showing an electric motor wherein said connection housing is formed by cold forging, die-casting, or the like. However, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schustek et al. in view of Larsen.

Regarding claim 9, Schustek et al. disclose the claimed invention except for showing an electric motor wherein said plastic deformation fastens split core blocks to said connection housing and in the lateral laminating direction of said laminated steel plate.

However, Larsen discloses an electric machine wherein split core blocks are fixed to connection housing in the lateral laminating direction of said laminated steel plate by means of anchoring rods in axial direction (abstract) for the purpose of fixing the stator teeth.

Since Schustek et al. and Larsen are in the same field of endeavor, the purpose disclosed by Larsen would have been recognized in the pertinent art of Schustek et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Schustek et al. by forming force-locking connection in axial direction so that plastic deformation fastens split core blocks to said connection housing and in the lateral laminating direction of said laminated steel plate as taught by Larsen for the purpose of accommodating the stator teeth.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (703) 305-3466. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers

Application/Control Number: 10/083,644

Page 10

Art Unit: 2834

for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

October 3, 2002


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